



Objective 1 TEKS A.1.C Review

A.1.C Describe functional relationships for given problem situations and write equations or inequalities to answer questions arising from the situations.

Equations and inequalities can be used to model real-life situations. Variable expressions are used to represent unknown quantities.

Brittany is 3 years younger than twice Jose's age.

$$b = 2j - 3$$

↑ ↑

Brittany's age is b . Jose's age is j .

EXAMPLE

Janice spends d dollars for n boxes of breakfast cereal. The cereal costs \$4 a box, but Janice has a coupon that gives her a \$3 discount. What equation describes the relationship between the number of dollars Janice spends and the number of boxes of cereal she buys?

n	This is the number of boxes of cereal Janice buys.
4	This is the price in dollars of one box of cereal.
$4n$	This is the price in dollars of n boxes of cereal.
$4n - 3$	This is the price of n boxes of cereal minus the discount.
d	This represents the number of dollars Janice spends.

The expressions $4n - 3$ and d represent the same amount. Therefore, the equation $d = 4n - 3$ describes the relationship between the number of dollars Janice spends and the number of boxes of cereal she buys.

YOU DO IT

Arturo owes Charles \$10. He wants to pay Charles back and also to buy some used CDs from him. Arturo spends m dollars to buy x used CDs and pay Charles the money he owes. The CDs cost \$6 each. What equation describes the relationship between the number of used CDs Arturo buys and what he pays Charles?

1. x How many CDs does Arturo buy?
2. 6 What is the price in dollars of 1 CD?
3. $6x$ What is the price in dollars of x CDs?
4. $6x + 10$ How many dollars will it cost Arturo altogether to buy x CDs from Charles and to pay him back?
5. m What letter represents the amount Arturo spends?
6. $m = 6x + 10$ What equation describes the relationship between the number of used CDs Arturo buys and what he pays Charles?